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"New Directions in Defense Acquisition and Technology"

**Address of
The Under Secretary of Defense for Acquisition and Technology
Dr. Paul G. Kaminski
to the
The Potomac Institute for Policy Studies
The Hyatt Regency on Capitol Hill, Washington, D.C.**

April 24, 1996

Ladies and gentlemen, it is a great pleasure to be with you and share some of my views on where I think the Department of Defense is headed in technology policy.

I'll start by acknowledging that the United States has the best led, trained and equipped military force in the world today. Since World War II, fielding technologically superior forces has been the cornerstone of our national military strategy. This advantage has allowed our forces to deter, and when deterrence failed, prevail often over numerically large enemy forces.

Our predecessors invested wisely in technology in the 1960s and 1970s. The result was an overwhelming, swift, decisive victory in Desert Storm and a continuing deterrence of our potential adversaries. Today, our planning must cope with increased uncertainty. We are far less certain about who our future adversaries will be or what technology we will face.

In aggregate terms, commercial industry surpassed the DOD in R&D spending back in 1965. The disparity between DOD and commercial sector investment in R&D has been growing wider ever since. This difference means that this nation's technological momentum is driven to a greater extent by commercial market forces.

As a result, we are witnessing breathtaking changes — driven by commercial markets — in the industrial base supporting our weapon systems and new military capabilities. No where more evident than in the US semiconductor industry. About 87 percent of US semiconductor production is being driven mainly by commercial data processing and telecommunications applications.

In Bosnia, we are spending about \$80 million on an information-communications initiative to provide improved C3 to Operation JOINT ENDEAVOR. The initiative is improving our capabilities in two ways: first, using commercial TV satellite technology to provide a direct broadcast communications capability; and secondly, by fielding a wide bandwidth, secure tactical internet through fiber and commercial business satellite transponders to allow for distributed collaborative planning among deployed C2

(Command and Control) nodes. In this way, we're giving local commanders a 5000 mile remote control of the programming they receive through 24 megabits-per-second satellite downlinks.

What this means to our forces is that everyone with a 20 inch receive antenna, cryptologic equipment and authentication will have access to the same data, at the same time. But, more importantly, the fielding of this capability will allow us to install and utilize, for this operation, some of the more advanced C4I capabilities being developed by the Government and industry today for use in the Global Command and Control System (GCCS).

The important messages behind this major thrust are that: (1) we're pushing hard to make advanced information capabilities available to our forces; (2) we're demonstrating our willingness to use—even to lease—commercially developed systems; and (3) we've identified the need for system engineering and system integration skills to architect multiple application layers for tailoring information systems to defense needs.

DUAL USE STRATEGY

In today's global economy, everyone, including our potential adversaries, will gain increasing access to the same commercial technology base. The military advantage will go to the nation which has the best cycle time to capture technologies that are commercially available; incorporate them in weapon systems; and field new operational capabilities.

In this environment, we have no choice but to move from separate industrial sectors for defense and commercial products to an integrated national industrial base. Leveraging commercial technological advances to create military advantage is critical to ensuring that our equipment remains affordable and the most advanced in the world.

The Department's dual use strategy remains one key to ensuring our military forces will have affordable access to the world's best technology and it consists of three pillars. The first pillar is leveraging the commercial sector's base of research and technology to provide militarily useful technology. The second involves leveraging the commercial sector's low cost production capabilities by manufacturing commercial and military items on the same production lines. And the third pillar requires creating the incentives and management approaches inside the DoD necessary to facilitate using these dual use, "dual produced" items in military equipment.

Dual Use Applications Program

The FY 1997 President's Budget contains \$250 million to begin the Dual Use Applications Program (DUAP), a joint program conducted by the three military departments, DARPA, and DDR&E. The DUAP will introduce dual use R&D approaches into the military Services as a new norm by developing dual use technologies for the direct benefit of military users.

Building on lessons from our past experience in this area, the DUAP will embed this new way of doing business throughout the military services by building a cadre of people who understand and accept it through real experience with it. The Service Acquisition Executives are committed to using DUAP to apply technology they need and leverage dual use R&D more effectively in their departments.

DUAP funds will create an opportunity for service program managers to fund new technology through a dual use approach. R&D projects will be solicited as government/industry partnerships, selected to meet Service needs, and managed by the Services using new authorities and methods. Each project will include, up front, a clear path for the technology to be used in a military system.

As a joint program, the DUAP will be a unique forum for all the Services to simultaneously refine and share what they learn about dual use R&D while working on technologies of joint interest. Without shared, joint learning in the right environment, our progress in making dual use a new norm will be much, much slower. Think of the DUAP as the joint dual use battlelab.

At this point, I'd like to comment on the findings reached by the Potomac Institute's Military and Industry Panel Dual Use Research Project under the leadership of General Al Gray. I would agree with the Project's conclusions concerning the importance of a dual use strategy and that dual use technology can make major improvements in warfighting capabilities and the affordability of military systems. I also agree with the observation that we have made important progress and that we must now better institutionalize our dual use strategy with the military services.

Commercial Technology Insertion Program

To begin this process, the Commercial Technology Insertion Program, being initiated in FY 1997 at a level of \$50 million, will accelerate the insertion of commercial technologies into defense systems by working with the Services to identify opportunities and to provide the funds necessary to overcome barriers to insertion. Funds will be used to qualify commercial technology for defense systems; to adapt commercial technologies to meet military needs; or to modify military systems to accept a commercial technology.

An ongoing success story, the insertion of Active Matrix Liquid Crystal Displays (AMLCDs) in weapon system cockpits, is being used as a model for the CTIP. This project is being funded by Title III of the Defense Production Act and is providing funds to program offices to qualify and/or accelerate the purchase of AMLCDs into weapon systems.

Seven AMLCD insertion efforts are underway. One of these efforts is the Army's AH-64D Longbow Apache helicopter which is in the middle of an upgrade program. The Apache Program Office wanted to incorporate AMLCDs into the Longbow but lacked the funds required to qualify them and was planning to use cathode ray tubes in their upgrade program. The insertion program is providing the funds required for qualification, allowing AMLCD technology to be incorporated into the Longbow with no schedule slippage and at a comparable acquisition cost. The results will be four new color displays per aircraft. These displays will be smaller, lighter in weight, and more reliable and capable than the previously planned equipment complement.

Project selection for the Commercial Technology Insertion Program is scheduled to be complete this month, which will allow the Defense subcommittees to preview precisely where we propose to invest the FY 1997 funds. Selection will be based on the impact the technology will have on the defense system's life cycle costs and performance, the pervasive impact the technology will have on a range of defense systems and the commitment of the Service to provide downstream funding needed for the acquisition of the technology.

ACQUISITION REFORM

One of the principal objectives of our acquisition reform program is to open the defense market to commercial companies and technology – not only the primes, but sub-tier suppliers as well.

Military Specifications Reform

We have effectively turned our procurement system on its head with respect to military specifications and standards. A program manager in the past had to get a waiver in order to use commercial and performance standards. Now the reverse is true. If a program manager wants to use military specifications, then he has to get a waiver in order to justify the extra cost entailed in military specifications.

We have reviewed all of our 30,000 specifications and standards, eliminating 2600 of them to date. We are continuing to implement the decisions on these documents. It is important to note that our policy is not one of "zero tolerance." Military specifications will continue to be used in some cases, such as to define

interfaces and ensure safety. In these cases, however, we still want to make sure that the documents are current and include current technology.

Single Process Initiative

The Department's Single Process Initiative is significant in that it is aimed at changing existing contracts to address a very real problem in many of our contractor's facilities—the requirements that impose different processes to manufacture similar product lines.

For example, in just one factory, a defense contractor was forced to use eight different soldering specifications—five for the government and three for commercial clients purchasing similar types of products. This meant the workers had to be trained on all eight soldering and inspection techniques. It also meant that the contractor had to maintain eight different types of production documentation. This cost him more. In turn, he passed those costs on to us. That is fair, but it is expensive. It is expensive for the Department and the taxpayer.

With this single process initiative--starting on existing contracts--we will reduce the number of processes used. This will save dollars, give us a better product, and lead to a more competitive industry.

This initiative is being implemented on an expedited basis. We will not spend months having detailed cost proposals prepared, audited and negotiated unless the initial review by an administrative contracting officer indicates that the possibility exists for substantial unilateral savings after the contractor transition costs and the government administration costs are considered. We expect the number of these unilateral savings cases to be few.

Chart 1 On

This initiative has been embraced by industry. The Defense Contract Management Command has received proposals for 156 process changes from 30 contractors—99 have been accepted, 43 are technically acceptable and only one has been found to be unacceptable. 32 processes have been modified. The average number of days for issuance of the contract modification since acceptance of the proposal has been 59 days.

Chart 2 On

The top three most frequently proposed process changes are: (#1) the quality program/system, followed by (#2) electrostatic protection processes, followed by (#3) configuration control system.

Charts Off

ARMAMENTS COOPERATION

The convergence of two trends—increasing likelihood of committing forces to coalition operations and reduced defense budgets—make the case for greater armaments cooperation with friends and allies.

Deploying forces in coalition operations with the forces of other countries places a high premium on interoperability—that is, ensuring that US and allied systems are compatible and can be sustained through a common logistics support structure.

The heightened emphasis on coalition operations, to include operations other than war, is especially important because it comes during a period of declining defense budgets not only in the United States, but on the other side of the Atlantic and Pacific as well.

In this environment, it is clear to me that we will have to leverage the technology and industrial base of all our nations to modernize the equipment of our defense forces at an affordable cost and in the end—obtain “best value for the money.” The United States and its allies are being challenged to do more with fewer resources, and cooperation provides the needed leverage.

We need to avoid the inclination to duplicate each other’s capabilities. Instead, we need to think in terms of building on developed capability where possible. To do this, we need to harmonize requirements from the start and increase the incentives for teaming of our industry—including removing the barriers to international teaming and barriers to commercial industry as well. We need to start doing this much earlier in the initial stages for our new programs.

As discussed earlier, the DOD has taken a number of unilateral actions to reform our acquisition system and better leverage the commercial industrial base. These actions also have increased the opportunity for international armaments cooperation. I would like to cite two examples of military specification reform in particular.

The first is the adoption of the ISO-9000 series of standards as an alternative for MIL-Q-9858. This change makes it easier for international businesses to compete on our contracts—we now accept the use of an international quality standard instead of demanding the use of a US military unique standard.

The second example is the adoption of the ISO 10012-1 calibration standard as an alternative for MIL-STD-45662A. Again, this change makes it easier for foreign based

businesses to compete on our contracts.

As we posture ourselves to take international cooperation into the 21st century, we need to extend our time horizon 5, 10, or 20 years ahead, and envision the international environment of the future. To address this challenge, the Defense Science Board is examining the issue of armaments cooperation.

The DSB task force on international armaments cooperation began work in October 1995 and is specifically chartered to identify:

- a model for 21st century armaments cooperation that preserves effective competition;
- methods for preserving effective two-way access to critical military technologies;
- methods to assure maximum leveraging of the commercial industrial base; and
- approaches for maximizing the involvement of the CINCs in international cooperative efforts.

This forward thinking is an essential component of ensuring future success in international cooperation.

The task force's efforts are still in progress, but the deliberation is focusing on a model that promotes international cooperation and maintains competition throughout the life of a program. The task force recommends that the U.S. should pursue international cooperation for specific political or mutual security ends, or to meet a specific need of coalition warfare.

In accomplishing these goals, we should realize net economic and industrial enhancements and extend scarce defense resources. Cooperation on common mission problems is central to this new model, and should focus on such coalition security needs as

- extended air defense,
- coordinated logistics,
- combat ID, and
- interoperable communications.

The task force believes, and I agree, that greater involvement by international industry teams is crucial to the model for 21st century cooperation. I would characterize our armaments cooperation efforts with Western Europe and Japan as a mature, heavily travelled two-way street. Our efforts with eastern Europe and Russia—signing data exchange agreements and participating exchange programs for scientific

personel – could be characterized as laying the foundations and building multiple bridges for future armaments collaboration.

In all cases, successful armaments cooperation requires that we create a seamless, interlocking “zipper” across the political-to-political, military-to-military, and industrial-to-industrial sectors of societies.

SUMMARY

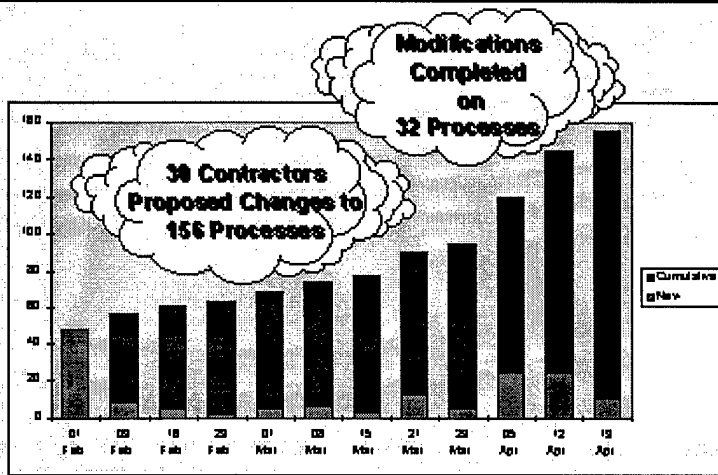
We are in the process of making the most revolutionary change in the defense acquisition system in the past 50 years. By pursuing a dual use strategy, acquisition reform, the Single Process Initiative, international armaments cooperation and commercial-off-the-shelf components, the Department is strongly committed to leverage an integrated national industrial base as well as that of our allies and reliable friends. The true measure of our success will be the implementation of these initiatives in the field – not just policy pronouncements in Washington.

I believe we have made an excellent start in moving the defense acquisition system in a new direction – one that secures the Department's long-term modernization strategy; meets the national security needs of the nation; and preserves a legacy of technological superiority for U.S. forces in the 21st Century.

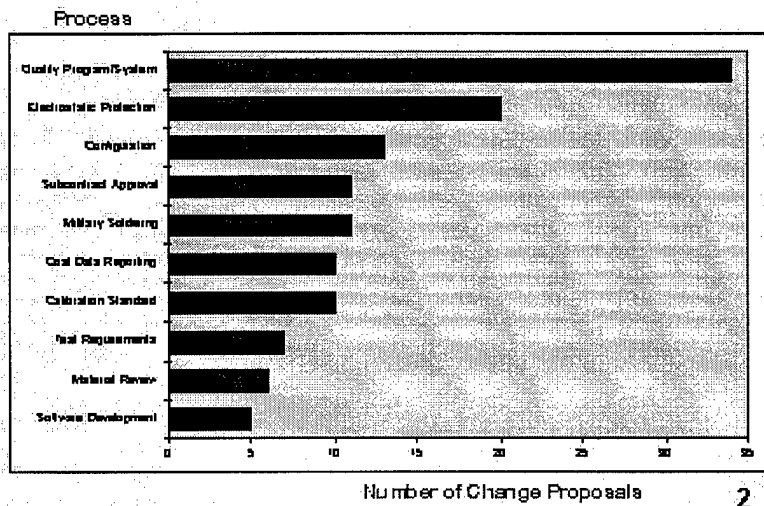
We have a number of successes under our belt but we are far from the end of this journey. To paraphrase Mr. Winston Churchill, “this is not the end, nor even the beginning of the end. It might be however, the end of the beginning.” I believe, like the Captain of a great ocean going vessel, the ship is beginning to respond to earlier commands – that the rudder is, in fact, connected to the bridge steering wheel. The large ship that represents DoD acquisition practice is beginning to turn.

Thank you all.

Process Change Proposals



Frequently Proposed Changes



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